

Historic, archived document

Do not assume content reflects current
scientific knowledge, policies, or practices.

967
2678
VOL. 6 No. 15

APRIL 13, 1956



Cooperative **ECONOMIC INSECT REPORT**

Issued by

PLANT PEST CONTROL BRANCH

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL BRANCH

ECONOMIC INSECT SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Branch serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Economic Insect Survey Section
Plant Pest Control Branch
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

GREENBUG light in scattered Oklahoma counties but some heavy infestations in northeast; light to medium in some north Texas counties; local infestations in southwestern Missouri; light to severe in southeast Kansas. (p. 299). ARMYWORM moths appearing as far north as Kentucky, Missouri, Illinois and Maryland. Large number moths at light traps in some areas of Mississippi and Louisiana. (p. 299). EUROPEAN CORN BORER survival 76 percent in southeastern South Dakota and abundant in debris in Delaware where 10 percent prepupae at Bridgeville. (p. 300). BROWN WHEAT MITE light to moderate in areas of Oklahoma, medium widespread in Denton County, egg laying underway Salt Lake Valley, Utah, medium infestations in Cuyama Valley, California. (p. 300).

PEA APHID heavy in northwest Arkansas, southern Missouri, central and northern Louisiana and in Salt River Valley, Arizona. Light in southwestern Illinois and light to heavy in southeastern Kansas. Building up on Eastern Shore of Maryland. (p. 301). ARMY CUTWORM of concern on alfalfa and small grains in some areas of Oklahoma and Nebraska. (p. 302). SWEETCLOVER WEEVIL becoming active in Nebraska and Delaware. (p. 302). SPOTTED ALFALFA APHID heavy in southwest Missouri; Washington County, Utah; Denton County, Texas. Light to heavy infestations in northwest Arkansas, scattered areas of Oklahoma, southeastern Kansas, north Texas, and moderate in areas of Arizona and Louisiana. (p. 302).

CLOVER LEAF WEEVIL causing damage in northwest Arkansas but counts lower than past three years in Illinois. Also active in North Carolina, Delaware and Maryland. (p. 304). ALFALFA WEEVIL damage appearing in Virginia, eggs hatching in Delaware, adults active in Maryland and southern Idaho, controls applied in Utah. (p. 304).

GREEN PEACH APHID may become serious on spinach on Virginia's Eastern Shore. Building up rapidly in lettuce in Maricopa County, Arizona. (p. 307). SPIDER MITES heaviest in three years on strawberries in eastern Virginia and attacking this crop in central Kentucky. Also increasing on sugar beets in Maricopa County, Arizona. (p. 307).

BOLL WEEVIL survival counts about same as last year in Virginia and survival is expected to be less than last year at Waco, Texas. (pp. 307, 308). COTTON FLEAHOPPER survival expected to be high in central Texas. (p. 308).

(Continued next page)

Observations on some insects of importance in Lebanon. (p. 316).

First Reported Records of Season (by areas)

ARMYWORM moths in Missouri, Illinois and Maryland.

GRASSHOPPERS hatching in Oklahoma and Arizona. PALE WESTERN CUTWORM appearing in Nebraska panhandle. VARIEGATED CUTWORM moths in Illinois. POTATO LEAFHOPPER at Gainesville, Florida, March 18. THREE-CORNERED ALFALFA HOPPER in northwest Arkansas. SPITTLEBUGS hatching in Illinois and Maryland; first on strawberries in Corvallis, Oregon, April 2. ROSY APPLE APHID hatching in Pennsylvania. CODLING MOTH pupa at Vincennes, Indiana, April 3. PEAR PSYLLA hatching in Jackson County, Oregon, April 4; egg-laying in Ulster County, New York. RED-BANDED LEAF ROLLER eggs at Vincennes, Indiana, March 28; first adults in Maryland April 4. First adults of UNSPOTTED TENTIFORM LEAF MINER emerged April 4 in Maryland. IMPORTED CABBAGEWORM adults in Delaware April 2. GREEN PEACH APHID hatching March 17 in Washington. COLORADO POTATO BEETLE on tomatoes in Tift County, Georgia, March 29. First HORN FLIES in Oklahoma.

WEATHER summary is on page 313.

ADDITIONAL NOTES (p. 315).

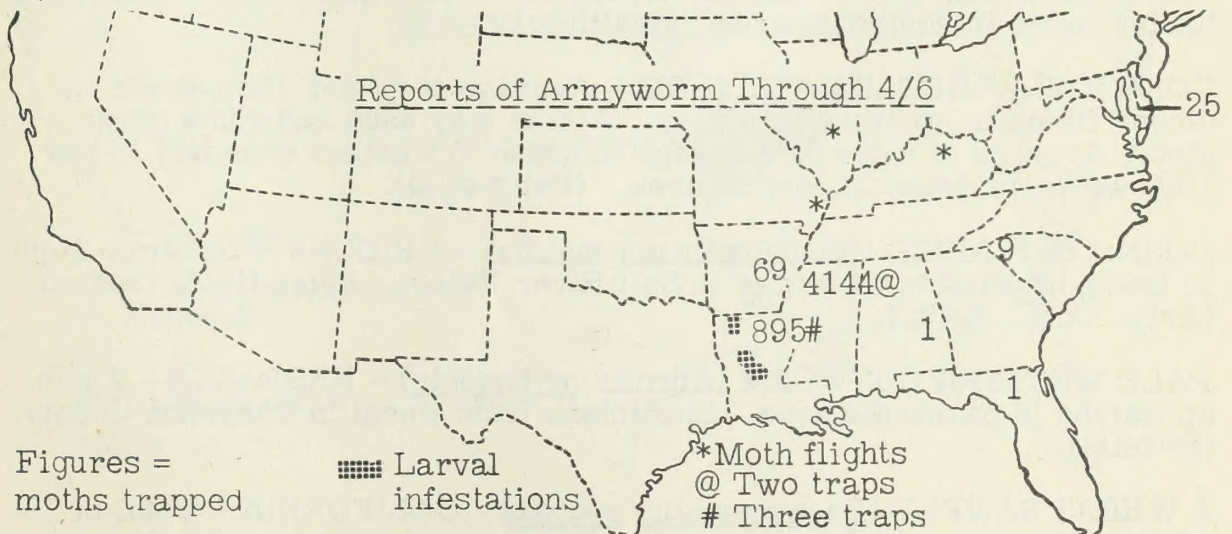
Reports in this issue are for the week ending April 6, 1956, unless otherwise designated.

CEREAL AND FORAGE INSECTS

GREENBUG (*Toxoptera graminum*) - OKLAHOMA - Light in isolated fields in Alfalfa and Tillman Counties. (Hatfield, Coppock). Light populations and situation under control in previously heavily infested areas of Grady and Canadian Counties due to rain and heavy predator populations. Non-existent in most western counties. (Coppock). Very spotted throughout northeast area. About two percent of fields infested; abundance light to extremely heavy. (Stiles). TEXAS - Light to medium widespread infestations on small grain in Hunt, Delta, Rockwall, Kaufman and Van Zandt Counties but showing decrease. (Hawkins). Light widespread populations on small grains in Denton County but high temperature and parasites and predators should eliminate infestations. (Chada).

MISSOURI - Reports of small localized spots in barley and wheat fields in some southwestern counties bordering Oklahoma and Kansas. (Kyd, Thomas). KANSAS - Moderate to severe populations in some barley and wheat fields of Cherokee, Labette, Montgomery and Crawford Counties in southeast Kansas. Scattered non-economic populations in nearly all wheat and barley fields in Bourbon, Crawford, Cherokee, Labette, Montgomery, Wilson, Neosho and Allen Counties. Counts in lightly infested fields ranged from 3 to 40 aphids per 25 sweeps of 15-inch net. Heavily infested fields contained areas of dead and/or injured plants up to several acres in area. Lady beetle populations, although still low, slowly increasing. Parasitized aphids in a few fields in Cherokee County. (Matthew).

ARMYWORM (*Pseudaletia unipuncta*) - LOUISIANA - Infestation, 4-5 larvae per square foot, in dense barley in Rapides Parish. Light infestations in oats in West Feliciana, East Baton Rouge, Natchitoches and Bossier Parishes. (Oliver). KENTUCKY - First moths (two) of season at Lexington, April 2. Appearance seven days ahead of 1955. (Rodriguez). MISSOURI - Moderate to locally heavy moth flight in extreme southeast area. (Kyd, Thomas). ILLINOIS - Moths observed in flight. (Petty et al).



EUROPEAN CORN BORER (Pyrausta nubilalis) - SOUTH DAKOTA - Survival in the field averaging 76 percent in southeastern counties. (Hantsbarger). DELAWARE - Abundant generally in stalks and stubble in southern Kent and Sussex Counties; 10 borers per stalk were maximum dissected, with 6-8 common. Approximately 10 percent prepupae at Bridgeville by April 2. (Milliron).

GRASSHOPPERS - OKLAHOMA - Hatching in Greer, Jackson, Kiowa and Comanche Counties. First-instar nymphs common along roadsides and in pastures. (Coppock). ARIZONA - Melanoplus sp. nymphs, mostly first instars, abundant in alfalfa at Theba, Maricopa County. (Ariz. Coop. Rept.).

HESSIAN FLY (Phytophaga destructor) - KANSAS - Non-economic infestations in a few fields of Cloud, Mitchell and Rooks Counties. (Jones).

BROWN WHEAT MITE (Petrobia latens) - OKLAHOMA - Populations moderate in Custer, Washita and northern Kiowa Counties during first week of April. Rains have caused heavy reduction in southern Kiowa and Tillman Counties, and it is doubtful these populations will again reach economic numbers. In most areas winter egg populations have decreased to low levels and white diapause eggs are increasing rapidly. (Henderson). Moderate populations in northern tier of counties and generally light in western counties. (Coppock). Moderate in Kiowa County. (Hatfield). TEXAS - Medium widespread populations on small grains, mostly wheat, in Denton County. (Chada). UTAH - First spring-generation adults in Salt Lake Valley winter wheat and stubble fields during week ending March 31. Egg laying underway. Populations range from 2 to 35 per linear foot of drill row. (Lieberman). CALIFORNIA - Medium heavy infestation in wheat fields in Cuyama Valley of San Luis Obispo and Santa Barbara Counties. (Cal. Coop. Rept.).

ENGLISH GRAIN APHID (Macrosiphum granarium) - KANSAS - Insignificant populations, 4 to 12 per 25 sweeps of 15-inch net, in most wheat and barley fields in southeast area. (Matthew).

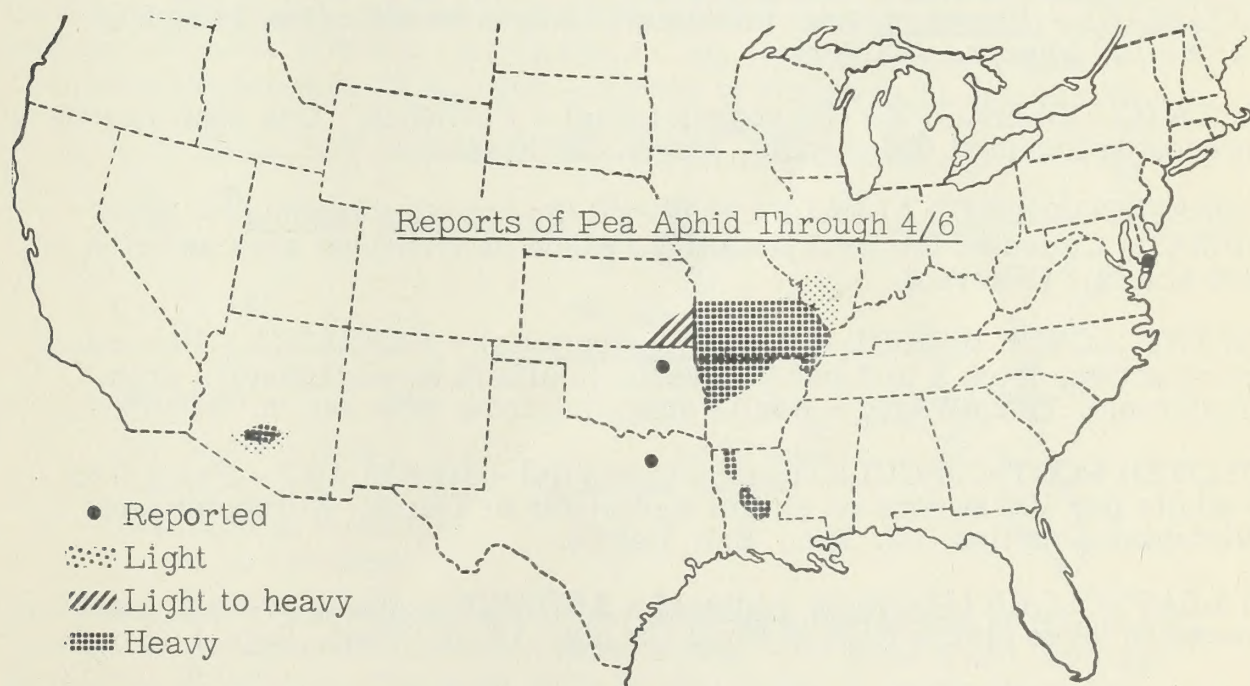
CORN FLEA BEETLES - ILLINOIS - Average of 67 per 100 sweeps in clover fields in southwestern area. Fields may have had some grass also. Average of 4 per 100 sweeps in grass in western area and 14 per 100 sweeps in grass in central area. (Petty et al).

CORN LEAF APHID (Rhopalosiphum maidis) - ARIZONA - General, light to heavy, infestation on barley in Salt River Valley. Some fields treated. (Ariz. Coop. Rept.).

PALE WESTERN CUTWORM (Agrotis orthogonia) - NEBRASKA - Again appearing in panhandle area. Specimens from wheat in Cheyenne County. (Roselle).

A WHEAT SAWFLY (Pachynematus sporax) - CALIFORNIA - Total of 19 adults, 35 eggs and 2 larvae found in Cuyama area in 7 wheat fields. (Cal. Coop. Rept.).

PEA APHID (Macrosiphum pisi) - MARYLAND - Building up on alfalfa on lower Eastern Shore; 2 to 15 per sweep. (U. Md., Ent. Dept.). ILLINOIS - Maximum population was 359.6 per 100 sweeps in southwestern area. (Petty et al). ARKANSAS - Unusually heavy in half of more of fields in northwestern quarter of State with damaging infestations in about one-third of them. Lighter in young alfalfa than in older fields. Estimated 2000-3000 aphids per sweep of 15-inch net in some of most heavily infested fields. Concurrent infestations of spotted alfalfa aphid in nearly all fields but damaging numbers in only relatively few. Insecticide applications in many fields for aphid and clover leaf weevil control. (Warren). LOUISIANA - Very heavy populations in alfalfa in Rapides, Natchitoches, and Bossier Parishes. (Oliver). TEXAS - Light widespread on vetch in Kaufman County. (Hawkins). MISSOURI - Heavy numbers continue to build over southern half of State with counts averaging 200 to 500 per crown in many fields. Spraying underway. Generally, temperatures too low for much parasite or predator activity. (Kyd, Thomas). KANSAS - Found in nearly all alfalfa fields examined in 11 southeast counties. Scattered infestations requiring control in Bourbon, Crawford, Cherokee, Labette and Montgomery Counties. Counts ranged from 20 to 1500 aphids per sweep of 15-inch net. Very few spotted alfalfa aphid found in fields heavily infested with pea aphids. (Matthew). OKLAHOMA - Average of 250 per square foot in one alfalfa field in Tulsa County. (Stiles). ARIZONA - High population, over 500 per sweep, on alfalfa in Salt River Valley from Mesa to Goodyear. West and south of this area populations lower, 25 per sweep at Arlington, Maricopa County, and 100 per sweep at Coolidge, Pinal County. Aphid not a problem outside the Salt River Valley. (Ariz. Coop. Rept.).



SOUTHERN CORN ROOTWORM (Diabrotica undecimpunctata howardi) - GEORGIA - Heavily infesting roots of last year's sweet corn on approximately one acre in Fulton County. (Parkinson, March 31).

ARMY CUTWORM (Chorizagrotis auxiliaris) - OKLAHOMA - Moderate to heavy populations in Alfalfa County small grains. Damage slight and larvae late instars. Light populations in alfalfa in Grant, Kay and Alfalfa Counties. Fairly common in roadside grass in Beckham County. (Coppock). NEBRASKA - Alfalfa fields moderately infested. Averaging 3 per square foot through Fillmore, Clay and Adams Counties. (Andersen).

CUTWORMS - DELAWARE - Larvae about one-third grown in red clover at Smyrna and Bridgeville. (Milliron). ILLINOIS - Highest cutworm population in central area; average of 1 per square foot in clover and alfalfa. Variegated cutworm moths in flight. (Petty et al). MISSISSIPPI - Thirty-three Agrotis gladiaria larvae collected in pasture in Oktibbeha County, March 26-30. (Hutchins). TEXAS - Light widespread on oats, vetch and barley in Kaufman County. (Hawkins). LOUISIANA - A. gladiaria continues to infest crimson clover at one to three per square foot in Claiborne Parish. (Oliver). WASHINGTON - Glassy cutworm (Crymodes devastator) again infesting large field of Merion bluegrass grown for seed near Pomeroy. This field nearly complete loss in 1955. Bunches of turf examined March 30 contained 6-12 or more young cutworms. (Cook).

LEAFHOPPERS - SOUTH DAKOTA - Aceratagallia sp. and Cuerna lateralis adults becoming active in alfalfa and sweetclover of southern area. Light populations. (Hantsbarger). UTAH - Dikraneura carneola common on winter wheat and grass in northern areas. (Knowlton). LOUISIANA - Empoasca sp. infesting alfalfa in Natchitoches Parish at 12 per 100 sweeps. (Oliver).

POTATO LEAFHOPPER (Empoasca fabae) - FLORIDA - One adult per 50 sweeps on lupine at Gainesville, March 18. (Mead).

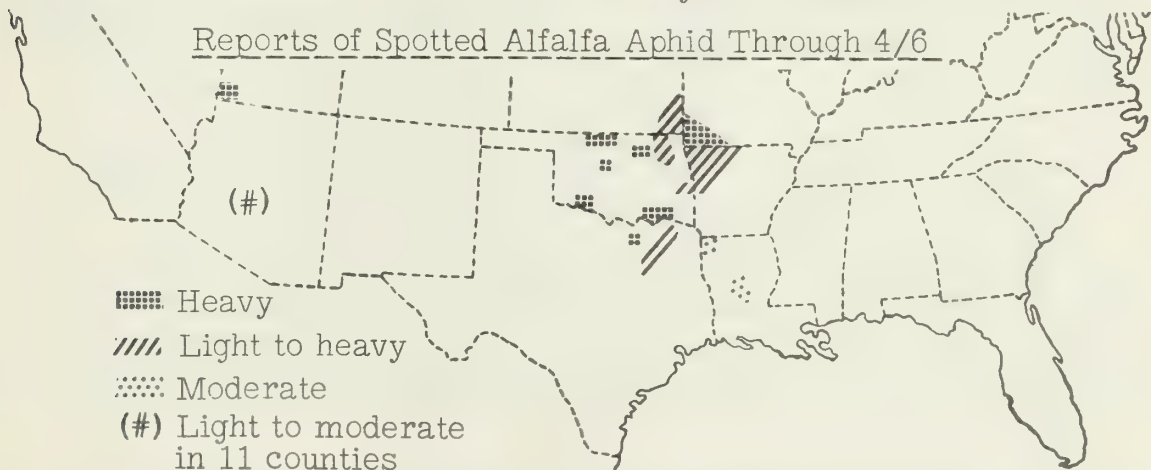
THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - ARKANSAS - Collected for first time this season in northwest area on vetch and alfalfa. (Warren).

SWEETCLOVER WEEVIL (Sitona cylindricollis) - NEBRASKA - Becoming more active, from 3 to 4 per 25 sweeps in alfalfa in southeastern area. (Andersen). DELAWARE - Adults emerging from hibernation. (Milliron).

CLOVER ROOT CURCULIO (Sitona hispidula) - MARYLAND - From 2 to 8 adults per 100 sweeps on alfalfa and clover in Talbot, Worcester and Wicomico Counties. (U. Md., Ent. Dept.).

A LEAFROLLER (Platynota stultana) - ARIZONA - Adults average 5 per sweep in large alfalfa field in Pinal County. (Ariz. Coop. Rept.).

SPOTTED ALFALFA APHID - MISSOURI - Heavy build-up in extreme southwest area causing severe wilting or death of plants in some instances. (Kyd, Thomas). ARKANSAS - Occurring with pea aphid in about half of alfalfa fields examined in northwest quarter of State. Damaging numbers in relatively few fields, but extremely heavy in spots in such fields. (Warren). OKLAHOMA - Heavy populations causing heavy to severe damage in isolated fields of Grant, Kay, Logan and Tillman Counties. Rains and heavy predator populations have reduced populations in most south central counties. (Coppock). Heavy populations in many sections of Choctaw, Tulsa and Bryan Counties. (Bower et al). Fifteen alfalfa fields in Washington, Rogers, Mayes, Sequoyah and Tulsa Counties showed infestation from 25 to more than 4,000 per square foot. Many winged forms. Some spraying in all sections. (Stiles). Most serious insect damage continues to be from spotted alfalfa aphid and abandonment of alfalfa is increasing over wide area of State. (Okla. Wkly. Cp. & Weath. Bull.). TEXAS - Heavy widespread on alfalfa in Denton County. (Chada). Medium to heavy widespread on alfalfa in Kaufman, Delta and Hunt Counties. (Simmons, Hawkins). KANSAS - Alfalfa fields surveyed in 10 southeast counties. Moderate to severe populations (as high as 2,000 aphids per sweep of 15-inch net) were found in several fields in Cherokee, Labette and Montgomery Counties, while other fields in these counties had light to moderate infestations (200 to 800 per sweep). Populations mostly wingless adults and nymphs; however, numerous winged adults noted. Several hundred acres sprayed. Light to moderate infestations in Crawford, Neosho and Wilson Counties and non-economic counts in Bourbon, Allen, Woodson and Linn Counties. Lady beetles were nowhere abundant but larvae were found in southern counties. (Matthew). No spotted alfalfa aphids found in several southwest central counties. (Gates). NEBRASKA - None found in southeastern counties. (Andersen). ARIZONA - Survey of alfalfa in 11 counties in



past three weeks showed following trends. Dormant stands at intermediate elevations showed little or no infestations; new growth had light infestation. Infestation ran from 15 to 50 per sweep at lower elevations. Yuma area appears to be only one that has already had moderate numbers on new growth and in this area treated fields are aphid-free or have low

numbers. (Ariz. Coop. Rept.). UTAH - Extremely numerous in Washington County alfalfa. (Knowlton). LOUISIANA - Moderate infestations remain in alfalfa in Bossier, Natchitoches and Red River Parishes. Several species of lady beetles and predaceous hemiptera very abundant. (Oliver).

CLOVER LEAF WEEVIL (Hypera punctata) - DELAWARE - Larvae active on red clover and alfalfa generally. (Milliron). MARYLAND - Light on alfalfa and clover on Eastern Shore. Some diseased larvae noted. (U. Md., Ent. Dept.). NORTH CAROLINA - Light general infestation on Ladino clover in Johnston County. (Rabb). ARKANSAS - Causing damage in some alfalfa fields in northwest quarter of State. Larval counts ranged from 6 per square foot in Washington County to 16 in Newton and Boone Counties. Insecticide applications in many fields for aphids and weevil. (Warren). ILLINOIS - Highest average population per section of the State was 13 per square foot in southeastern Illinois. Population in southwestern area was 8.5 per square foot and larval population in central section was 7.5 per square foot. In other areas population lower. These counts much lower than in 1953, 1954 and 1955. (Petty et al).

THRIPS - UTAH - Survival high in northern Utah alfalfa fields and orchards. (Knowlton).

SPITTLEBUGS - ILLINOIS - Hatching in extreme southeastern area. (Petty et al).

MEADOW SPITTLEBUG (Philaenus leucophthalmus) - MARYLAND - First nymphs of season on weeds near alfalfa, Talbot County, April 4. (U. Md., Ent. Dept.).

ALFALFA WEEVIL (Hypera postica) - VIRGINIA - Overwintered adults in most alfalfa fields in Richmond area and eastward. In many of these counties larvae very active and damage noticeable in tops of alfalfa. Upward of 90 percent of eggs have hatched. (Willey). No larvae found west of Lynchburg (Rowell), but active in Brunswick County (Marshall) and Goochland County (Truett). DELAWARE - Adult feeding general. Egg laying and first hatching of overwintered eggs at Bridgeville April 2. (Milliron). MARYLAND - Adults becoming active in alfalfa in Talbot, Worcester and Wicomico Counties. Mating evident. (U. Md., Ent. Dept.). UTAH - Controls applied to several thousand acres in a number of counties. (Knowlton). IDAHO - Adults active and feeding in all fields checked between Parma and Homedale, but populations lower than in previous years. Adults in fair numbers in Idaho Falls area. (Portman).

TARNISHED PLANT BUG (Lygus lineolaris) - ILLINOIS - Maximum population was average of 26 per 100 sweeps in east southeastern area. (Petty et al). SOUTH DAKOTA - Adults becoming active in alfalfa in southern counties. Light populations. (Hantsbarger). LOUISIANA - Eight to twelve per 100 sweeps of alfalfa in Rapides, Natchitoches and Bossier Parishes. (Oliver). PENNSYLVANIA - Numbers found in legumes in York County. (Pepper).

FRUIT INSECTS

ROSY APPLE APHID (Anuraphis roseus) - NEW JERSEY - Common in many apple plantings. (Merrill). PENNSYLVANIA - Eggs beginning to hatch in Franklin, York and Adams Counties. (Pepper, Asquith).

APPLE APHID (Aphis pomi) - PENNSYLVANIA - Peak of hatching in Franklin, York and Adams Counties. (Pepper, Asquith). MARYLAND - Hatching occurring during past ten days. (U. Md. Ent. Dept.).

APPLE GRAIN APHID (Rhopalosiphum fitchii) - PENNSYLVANIA - Peak of hatching in Franklin, York and Adams Counties. (Pepper, Asquith). DELAWARE - Hatching continues. (Late News). OREGON - Moderate to heavy infestations on pear fruit buds in Jackson County. (Gentner).

APHIDS - INDIANA - Rather heavy populations on apples in Lawrence and Orange Counties. (Marshall).

ORCHARD MITES - NEW JERSEY - Red mite eggs very numerous. Mite problem appears worse than in 1955. (Merrill). UTAH - Eggs of Bryobia praetiosa light to threateningly abundant in Weber County apple orchards. (Davis, Knowlton).

EUROPEAN RED MITE (Metatetranychus ulmi) - IDAHO - All trees examined in Boise Valley had eggs. Damage expected unless treatment used. (Portman).

PEAR LEAF BLISTER MITE (Eriophyes pyri) - WASHINGTON - Appears unusually abundant on mature, bearing pear trees in the Sawyer-Zillah area. (Lanchester).

PLUM CURCULIO (Conotrachelus nenuphar) - ARKANSAS - In Nashville area, 30 adults collected from 14 trees. None in Clarksville area. (Warren). GEORGIA - Correction: CEIR 6(13):267, note should be credited to Snapp. (Johnson).

CODLING MOTH (Carpocapsa pomonella) - INDIANA - One pupa found April 3 in Vincennes area. (Hamilton).

PEAR THRIPS (Taeniothrips inconsequens) - OREGON - Infestations comparatively light on prunes. Began to emerge March 28. (Jones).

PEAR PSYLLA (Psylla pyricola) - OREGON - Eggs hatching in Jackson County, April 4. (Gentner). WASHINGTON - Small numbers of eggs. (Lanchester).

RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) - INDIANA - Eggs first found in Vincennes area March 28. (Hamilton). MARYLAND - First adults from field cages, April 4. (U. Md. Ent. Dept.).

UNSPOTTED TENTIFORM LEAF MINER (Callisto geminatella) - MARYLAND - First adults emerged from field cages April 4. (U. Md. Ent. Dept.).

SAN JOSE SCALE (Aspidiotus perniciosus) - CALIFORNIA - Heavy infestations of immature females under bark of apple trees in El Dorado County. (Cal. Coop. Rept.). IDAHO - Scattered infestations in 4-5 orchards examined in Boise Valley. Infestations varied up to considerable numbers. (Portman).

EASTERN TENT CATERPILLAR (Malacosoma americanum) - MARYLAND - First tents of season on wild cherry at Lanham, Prince Georges County. (U. Md., Ent. Dept.).

CATFACING INSECTS - ARKANSAS - Twenty-six tarnished plant bugs and 35 stink bugs jarred from 14 trees. (Warren). INDIANA - Two tarnished plant bugs and eight stink bugs jarred from 20 trees in Vincennes area. (Hamilton).

A PLUM MITE (Diptacus gigantorhynchus) - OREGON - Hundreds of hibernating adults in fruit bud clusters of plums in an orchard in Jackson County, March 29. (Gentner).

A CERAMBYCID - ARIZONA - Found in dead branches of oranges in a small area at Tempe with up to ten larvae per tree. (Ariz. Coop. Rept.)

Citrus Pest Situation in Florida, March 30

Peak of present hatch of PURPLE SCALE passed and new hatch will start late in May. Hatching of FLORIDA RED SCALE at peak and declining trend expected. CITRUS RED MITE activity at very high level but near peak. Unless spring rains are abundant, level will be high through June. SIX-SPOTTED MITE infestations continue low except in a few unsprayed groves. (Pratt, Thompson, Johnson).

TRUCK CROP INSECTS

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - GEORGIA - Moderately infesting tomatoes in Tift County, March 29. (Morgan).

CUTWORMS - GEORGIA - Moderate infestations on tomato transplants in Madison County, March 3 (Johnson).

YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli) - FLORIDA - Larvae averaging 40 per leaf of tomato at Miami, Dade County, March 27. (Daigle).

HARLEQUIN BUG (Murgantia histrionica) - MISSISSIPPI - Adults feeding on crucifers in Oktibbeha County. (Hutchins).

IMPORTED CABBAGEWORM (Pieris rapae) - DELAWARE - A few adults in Sussex County, April 2. (Milliron).

POTATO PSYLLID (Paratrioza cockerelli) - ARIZONA - Adults and eggs numerous on 100 acres of potatoes at Queen Creek, Maricopa County. (Ariz. Coop. Rept.)

GREEN PEACH APHID (Myzus persicae) - VIRGINIA - Potentially serious situation on spinach in Eastern Shore area. (Hofmaster). ARIZONA - Building up rapidly on most lettuce fields at Mesa and Queen Creek, Maricopa County. (Ariz. Coop. Rept.). WASHINGTON - Reported hatching March 17. Many not hatched. Some mature aphids. (Lanchester).

SEED-CORN MAGGOT (Hylemya cilicrura)- VIRGINIA - Causing some damage to spinach in Norfolk area. (Hofmaster).

BET LEAFHOPPER (Circulifer tenellus) - CALIFORNIA - Dry weather expected to make spraying unnecessary near Maricopa, Kern County. (Cal. Coop. Rept.).

MITES - KENTUCKY - Infestation of Tetranychus sp. attacking new strawberry growth in central area. (Rodriguez). VIRGINIA - Heaviest infestations of spider mites on strawberries in Norfolk area in three years. (Hofmaster). ARIZONA - Spider mites, probably Tetranychus telarius, becoming heavy in sugar beet seed fields in Tolleson area, Maricopa County, but not a major problem yet. (Ariz. Coop. Rept.).

MEADOW SPITTLEBUG (Philaenus leucophthalmus) - OREGON - First reported on strawberries in Corvallis, April 2. (Rosenstiel).

TOBACCO BUDWORM (Heliothis sp.) - GEORGIA - Lightly infesting tobacco plant bed in Tift County, April 3. (Morgan).

TOBACCO FLEA BEETLE (Epitrix hirtipennis) - NORTH CAROLINA - Several tobacco plant beds in Wilson County showing light damage. (Guthrie).

COTTON INSECTS

Boll Weevil Survival Counts in Virginia

April 3-4, 170 square yards of surface woods trash were examined from samples collected last week in March in southeastern Virginia. These examinations were made on the same farm sites from which the 1955 fall examinations were made with the exception of Mecklenburg County. In this county, because of rains, only two out of five of the original fall sites were examined. The 1955 fall examinations showed an average of 1,476 live boll weevils per acre, while the 1956 spring examinations showed an average of 85 per acre, giving a winter survival of 5.7 compared with a survival of 3.5 percent for the winter of 1954-55. The number this spring is only slightly more than that found in the spring of 1955 (73 per acre) and considerably less than the numbers found in the spring examinations for 1950, 1951, 1952 and 1954. (Walker, Morris, Willey, Harrell, et al).

Boll Weevil and Cotton Fleahopper Hibernation and Survival Studies at
Waco, Texas, during the Winter of 1955-1956

Boll Weevil

Five hundred field-collected boll weevils were installed on October 27, 1955, in each of 10 cages located in a wood lot in a continuance of survival studies made each year beginning with the winter of 1939-1940. Boll weevil activity is recorded almost daily until removal of surviving weevils begins on May 1 of each year. There was no activity during March of 1956. The dry weather accounts for the lack of activity. The winter was rather mild in addition to being very dry. Freezing temperatures occurred on a total of 38 days. The lowest temperature recorded for the winter was 20° on December 16, 1955. Since the winter was mild, survival can be expected to be comparable with that which occurred in 1954 (2.9 percent), 1953 (2.3 percent), 1950 (4.3 percent), but probably considerably less than in 1955 (11.1 percent). Observations made last fall indicated that weevils entered hibernation quarters in about normal numbers for the area.

Cotton Fleahopper

Collections of two species of croton were made on November 21, 1955, for the cotton fleahopper survival studies. One hundred Croton texensis plants were collected from one location in each of Bell, Coryell, and Bosque Counties. One hundred Croton capitatus plants were collected from one location in each of McLennan, Falls, Limestone and Hill Counties. These host plants (100 plants per cage) were installed on February 29, 1956. The first emergence of cotton fleahoppers occurred on February 29. A total of 17 nymphs emerged during February and March. Emergence was light due to the extremely dry weather. In 1955 the first emergence occurred on March 4 and the emergence for the month was 2492. In 1954 the first emergence occurred on February 17 and the emergence during February and March was 326. Late summer and early fall rains in 1955 were favorable for the development of a good crop of croton in central Texas. It was heavily infested with cotton fleahoppers and egg deposition was heavy. It is expected that survival will be high but owing to the dry weather the hatch will be late. The extremely dry weather during most of February and all of March indicates that development of spring host plants such as evening primrose and horsemint will be late. If their development is considerably delayed, development of cotton fleahopper populations will be delayed, and if horsemint does not mature until mid-June, then injurious infestations on cotton could occur during the mid-season period. If host plant development is normal for the area, migration of the pest to cotton occurs in late May and early June and damage is prevented through the use of the early-season insect control program with the last insecticidal application being scheduled for the week occurring prior to June 10. (Parenchia et al).

BOLL WEEVIL (Anthonomus grandis) - TEXAS - Feeding on terminals of young cotton in lower Rio Grande Valley. (Deer).

BOLLWORMS - TEXAS - Causing some damage to cotton terminals in lower Rio Grande Valley. (Deer).

PINK BOLLWORM (Pectinophora gossypiella) - OKLAHOMA - None found in 4920 square yards of debris from 163 fields in 14 eastern counties. Four live and 79 dead larvae in 22 samples from standing stalks in Caddo, Cotton, Jackson, Stephens and Tillman Counties. (Bower et al).

CUTWORMS - TEXAS - Heavy populations in parts of San Patricio County. (Pawlik). Still present in lower Rio Grande Valley. (Deer).

A CATERPILLAR (Noctuella rufofascialis) - TEXAS - Damaging terminals of young cotton south of Alamo. (Deer).

THRIPS - TEXAS - Causing some damage to cotton interplanted with onions in Brownsville area and south of LaFeria. (Deer).

INSECTS AFFECTING MAN AND ANIMALS

CATTLE GRUBS - OKLAHOMA - Heel flies chasing cattle in Pushmataha County. (Gowen).

HORN FLY (Siphona irritans) - OKLAHOMA - First flies of season during week. (Gowen).

SHEEP SCAB MITE (Psoroptes equi ovis) - VIRGINIA - Found on 390 of 589 head inspected, and 301 were dipped during March. (Va. Livestock Health Bul., March).

SHEEP KED (Melophagus ovinus) - UTAH - Reported high in some flocks that are shorn. (Knowlton).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

PINE NEEDLE SCALE (probably Phenacaspis pinifoliae) - NORTH CAROLINA - Crawlers occurring on white pine in Buncombe County. (Green).

EUROPEAN ELM SCALE (Gossyparia spuria) - IDAHO - Heavy infestations caused serious injury to elm trees at University arboretum at Moscow. (Manis).

BAGWORMS - PENNSYLVANIA - Rather high populations on ornamentals in western area, March 22. No parasitism. (Cole).

VICEROY (Limenitis archippus) - MISSISSIPPI - Overwintering larvae feeding on cottonwood foliage in Washington County. (Morris).

OYSTERSHELL SCALE (Lepidosaphes ulmi) - IDAHO - Heavy infestations caused serious injury to green ash at University arboretum, Moscow. (Barr).

BOXWOOD LEAF MINER (Monarthropalpus buxi) - DELAWARE - Abundant in American boxwood at Newark. (MacCreary).

COTTONY-CUSHION SCALE (Icerya purchasi) - GEORGIA - Adults and crawlers heavily infesting Pittosporum, March 30. (Jordan).

A MILLIPEDE (Oxidus gracilis) - FLORIDA - Severely infesting philodendron at Cutler, Dade County, March 13. (Miles).

Correction: CEIR 6(14):285. Should read A SCALE (Phenacaspis nyssae).

STORED PRODUCTS INSECTS

Stored Grain Insects, Arkansas

Of 74 bins of farm-stored rice and oats examined in the Stuttgart-Dewitt area, 17 were infested with one or more species. Tribolium sp. infested three bins, saw-toothed grain beetle in 14 bins; flat grain beetle in three; cadelle in one; and miscellaneous insects in nine bins. (Rouse).

KHAPRA BEETLE (Trogoderma granarium) - CALIFORNIA - Four premises fumigated in southern area. Total infestations in 18 counties 268 comprising 64,383,707 cubic feet. Premises fumigated are 143 with 45,305,852 cubic feet. (Cal. Coop. Rept.).

A DERMESTID (Trogoderma versicolor) - NORTH DAKOTA - Infesting seed samples at Fargo. Some injury to stored grain seed samples. Determination reaffirmed by W. H. Anderson. (Post).

BENEFICIAL INSECTS

CONVERGENT LADY BEETLE (Hippodamia convergens) - ARIZONA - Larvae and pupae abundant, up to 15 per sweep in one alfalfa field at Theba and Goodyear. Small numbers in alfalfa elsewhere in State. (Ariz. Coop. Rept.).

DAMSEL BUGS (Nabis sp.) - SOUTH DAKOTA - Overwintering adults becoming active in alfalfa fields in southern counties. Populations light. (Hantsbarger).

MISCELLANEOUS INSECTS

TERMITES - KENTUCKY - Many specimens of winged forms received during March. (Price). PENNSYLVANIA - Swarming in homes in Lackawanna, Franklin and York Counties. (Gesell, Pepper). VIRGINIA - Sexual forms of subterranean termites emerging in all areas. (Rowell). UTAH - Subterranean termites damaging a large home at Providence. (Knowlton).

PILLBUGS - WASHINGTON - Annoying in houses at Union Gap latter part of March. (Landis).

PAVEMENT ANT (Tetramorium caespitum) - PENNSYLVANIA - Heavy swarming in several homes in Lackawanna County. (Gesell).

BROWN-BANDED ROACH (Supella supellectilium) - NORTH DAKOTA - Becoming established in State. Reported from Fargo, Carrington and Dickinson in 1954 and abundant in a home in Fargo in 1955. (Post).

BOXELDER BUG (Leptocoris trivittatus) - NEBRASKA - Very prevalent throughout State. (Andersen). KENTUCKY - Many inquiries received. (Price).

CLOVER MITE (Bryobia praetiosa) - IDAHO - Eggs hatched in Moscow area. (Manis). NEBRASKA - Very prevalent throughout State. (Andersen). KANSAS - Several infestations in homes in Shawnee and Wyandotte Counties. (Brady). UTAH - Invading numerous homes in Salt Lake and Weber Counties. (Knowlton). VIRGINIA - Reports received of activity in residences in many parts of State. (Rowell). MARYLAND - Annoying to householders Baltimore area. (U. Md., Ent. Dept.).

Insect Conditions in Puerto Rico

GREEN PEACH APHID (Myzus persicae) noted for first time in tobacco seed beds: at Cayey and Isabela. Infestation of pigeon pea pods by TOBACCO BUDWORM (Heliothis virescens) at Isabela this winter averaged only 6 percent. Winged adults of a TERMITE (Cryptotermes cavifrons (det. T. E. Snyder)) noted in October at Rio Piedras. A CATERPILLAR (Pseudosphinx tetrio) defoliated white frangipani trees (Plumeria alba) in Santurce, Rio Piedras and Isabela in November 1955. A PARASITE (Lixophaga diatraeae) was nearly 100 percent effective against sugarcane borer (Diatraea saccharalis) in upland rice at Caguas in October. (Wolcott).

RECENT INTERCEPTIONS AT PORTS OF ENTRY

Of interest was the recent interception of living eggs, pupae, and adult of the citrus blackfly (Aleurocanthus woglumi) on orange leaves in baggage from Mexico at San Ysidro, California (Maner), Laredo, Texas (Davis), and El Paso (Green). This insect is considered an important pest of citrus and other fruits in parts of Mexico, Central America, the West Indies, and the Far East. It has been reported from more than 150 plants, including mango, coffee, myrtle, cherimoye, sapote, persimmon, pear, guava, and varieties of citrus. Injury is due to the feeding of the larvae on the underside of the leaves. This is said to impair the vitality and hinder growth of the trees and affect the quality of the fruit. The foliage is also disfigured by sooty mold that develops on the excretions of the insect.

Observations on the biology of the citrus blackfly in the Canal Zone indicate that 3-6 generations a year may occur. Eggs are deposited in spirals of 30-50 on the underside of the leaves. One female may deposit about 100 eggs. They hatch in 11-20 days. There are 3 larval instars with a larval period of 18-70 days. Pupal stage lasts 16-80 days. Adults live 6-12 days.

Living specimens of Aleurocanthus woglumi have been intercepted on numerous occasions at Mexican border ports in recent years since the introduction and spread of the insect in Mexico.

(Compiled - Plant Quarantine Branch).

Since January 1, 1956, seven infestations of citrus blackfly have been found in Texas between Brownsville and Laredo. In each instance the Texas Department of Agriculture has initiated prompt eradication measures consisting of spraying the infestation and a surrounding security area with three applications of an oil-rotenone spray at 21-day intervals.

Correction: Summary of Insect Conditions in New York 1955. CEIR p. 156, February 24, 1956. Re-wording: CORN EAWORM (Heliothis zea) was the greatest problem of sweet corn this past season. Damage was most extensive on Long Island where infestations of ears ranged up to 100 percent by late August and in the Hudson Valley where the species first appeared in small numbers in the tassels in June. From late July to late September in the mid-Hudson area, the percentages of ears damaged ranged from 40 to 90 percent in unsprayed plantings. (La Plante).

WEATHER FOR THE WEEK ENDING APRIL 9, 1956

Widespread moderate to strong winds on several days, sharply fluctuating temperatures, duststorms in the Southwest, numerous tornadoes, and severe thundersqualls with hail from the central and lower Great Plains to the Great Lakes, near blizzard conditions in the Red River of the North and upper Mississippi Valleys, heavy rains in most of the South even as drought intensified in Florida, and one of the worst April snowstorms in many years in the Northeast were some of the week's weather highlights as a series of storm systems moved across the Great Plains to the Great Lakes and another one crossed the eastern States from the lower Mississippi Valley to New England. In the eastern half of the country unseasonably warm weather with maxima of 90° or above in the Rio Grande Valley prevailed until the weekend, when a cold air intrusion reduced temperatures by 15° or 20° . Under the influence of the warm weather the snow cover retreated to extreme northern areas, maple sugaring activities increased in Michigan, and fields were green as far north as Pennsylvania.

Heavy rains which fell in the East about midweek totaled 2 to over 4 inches in Tennessee and most of Alabama, Mississippi, and Louisiana, and over an inch in most of the remainder of the East. The rains bypassed Florida and extreme southern Georgia, however, where extensive irrigation is necessary. No station in Florida reported as much as one-tenth of an inch of rain and most stations reported no rain at all; pastures continued in poor condition, a high fire hazard exists except in the northern portion, streams and lakes are unusually low, and many wells are failing.

Drought also continued to plague large areas in the lower Great Plains and in the upper Mississippi Valley. Dust and wind further damaged wheat in west Texas, New Mexico, and Colorado, but Kansas and Oklahoma received some rain and snow, which settled the dust and furnished some beneficial moisture. Precipitation was very light in the Far West except for some moderate to heavy amounts in the central Rocky Mountain region.

Temperatures for the week averaged above normal in the East and below in the West, with the dividing line extending from Del Rio, Texas, to International Falls, Minnesota. Extreme anomalies ranged from $+9^{\circ}$ at Grand Rapids, Michigan, to -6° or above at several stations in the northern Great Plains.

The snow cover which retreated to the higher mountains & sections along the Canadian Border during the first part of the week was extended over the Appalachians to southwestern Virginia on the 8th, and at the same time snow which was still falling in the central Great Plains at the end of the period ranged in depth from 1 to over 4 inches in extensive areas of Kansas, Nebraska, and adjacent areas.

The weekend snowstorm in the Northeast was reported to be the most severe April snowstorm in Maine, Massachusetts, New Hampshire, and Vermont in 23 years. Following the storm depths in eastern New York State ranged up to 25 inches in the Catskills and 16 inches in eastern (Weather continued on page 315)

LIGHT TRAP COLLECTIONS

	Pseudal. unipunc.	Prod. ornith.	Agrot. ypsilon	Perid. marg.	Feltia subt.	Heliothis zea vires.	Agrotis malefida
KANSAS							
Wathena 4/1			1				
Manhattan 4/2-6			6				
LOUISIANA							
Tallah* 3/31-4/6	89	5	97	105	12	40	2
Franklin 3/7-4/1	29	15	21	10	27	4	1
Baton Rouge 3/30-4/7	25	26	22	1	79	25	
TENNESSEE (counties)							
Shelby 3/27-4/2	62	3	3	8			
Madison	52	4	10	6			
Lawrence	25						
Maury	47	2	7				
Robertson	6						
Cumberland	1		3				
Knox	2		8				
Greene	9	3	5				
MISSISSIPPI (Counties)							
Washington* 3/30-4/5	4144		16	451		29	
Coahoma 4/1-6	46		9	42			
Humphreys	48						
Oktibbeha	100		9	12		12	
SOUTH CAROLINA							
Clemson 3/25-31	1	1	2				1
Oconee 4/2-7	9	7	2		1		
FLORIDA							
Monticello 3/27&28							
Gainesville 3/28	1				5		
Homestead 3/17&30					4	1	
Sanford 3/29					3		
GEORGIA (Counties)		3			7		
Tift 3/25-31			1		2		
Spalding 3/24-30			1		1		
*Three traps at Tallulah; two in Washington County.							

(Continued on page 315)

LIGHT TRAP COLLECTIONS (Cont'd)

MARYLAND - (Montgomery County 4/3-6) Pseudaletia unipuncta 35, Prodenia ornithogalli 7, Agrotis ypsilon 23, Peridroma margaritosa 7.
 ALABAMA - (Auburn 4/2-7) P. unipuncta 1. ARKANSAS (Stuttgart 3/29 - 4/4) P. unipuncta 69, P. ornithogalli 4, A. ypsilon 6, Heliothis zea 3; (Van Buren 3/30-4/5) P. unipuncta 6; (Fayetteville 3/31-4/7) P. unipuncta 57, P. ornithogalli 14, A. ypsilon 13.

ADDITIONAL NOTES

NEW YORK - One adult PEAR PSYLLA found April 6, Orange County; egg-laying heavy April 5 and 6 in protected areas Ulster County; adults noted March 27, Niagara County. (Wkly. News Lett.).

WASHINGTON - IRIS WHITEFLY (Aleyrodes spiraeoides) in flight March 28 at Union Gap. (Landis).

ILLINOIS - One TARNISHED PLANT BUG jarred from trees April 4 at Mounds and sweeping in alfalfa showed only slight increase at Crab Orchard Lake, April 4. EUROPEAN RED MITE eggs hatching in Jackson County. APHIDS beginning to hatch. Eggs very scarce in southern and central areas and none on foliage. (Chandler).

WEATHER (Continued from p. 313).

Long Island, while in New England depth ranged from a few inches along the coast up to nearly 2 feet in some interior sections. High winds caused widespread damage along the New England Coast, and the combined action of wind and snow downed many utility lines in the interior.

Of the numerous midwestern tornadoes on the 3d, those in Michigan apparently were the most disastrous, with 18 deaths, 200 injuries, and \$12, 000, 000 property damage being reported for the State with the Grand Rapids area suffering the heaviest losses. Wisconsin reported 9 deaths and scores of injuries. Indiana reported 22 injuries and \$300, 000 damage in Washington County. One death and several thousand dollars damage occurred near Henderson, Kentucky. Tornadoes also occurred in several other States from which no estimates of losses have been received. (Summary Supplied by U. S. Weather Bureau).

Observations on Some Insects of Importance in Lebanon*

Reported by E. R. Millet

As 1955 was the writer's first year in Lebanon, conditions cannot be compared with previous years.

Fruit Insects

OLIVE FRUIT FLY (Dacus oleae) was extremely heavy with 80-100 percent infestation where olive fruit was found at higher altitudes. Because of a heavy crop in 1954 and an extremely mild winter following, the groves in the two large coastal areas at Choueifat and Zghorta had no dormancy period and consequently were void of fruit. A SCOLYTID (Phloeotribus scarabaeoides) is sometimes serious in olive trees. It makes shot-holes in the bark and forms galleries and tunnels under the bark. Damage by the MEDITERRANEAN FRUIT FLY (Ceratitis capitata) was serious in all fruits that it attacks, particularly pomegranates. Damage in citrus fruits, however, was not as serious as in other fruits. Apples in better-kept orchards where spray programs were followed had practically no damage from CODLING MOTH (Carpocapsa pomonella) but damage was considerable where spraying was not done. APPLE APHID (Aphis pomi) and WOOLLY APPLE APHID (Eriosoma lanigerum) were prevalent in poorly-kept orchards, with the latter heavy in these and the former occurring even in the better-kept orchards. EUROPEAN RED MITE (Metatetranychus ulmi) was found quite freely in orchards where no spray program was followed and was light in sprayed orchards.

A BUPRESTID BORER (Capnodis sp.) attacks the trunk and base of apple and other trees and LEOPARD MOTH (Zeuzera pyrina) larvae attack many fruit trees. A LACE BUG (Stephanitis pyri) was observed more frequently on apples than pears. OLIVE SCALE (Parlatoria oleae) was found more prevalent on apples and pears than olive. Severe infestations of a GRAPE BERRY MOTH (Lobesia botrana) and GRAPE PHYLLOXERA (Phylloxera vitifoliae) were observed on grapes. A CICADA (Chloropsalta ziridissima) is quite destructive on grapes but little is known about it. Bananas in Lebanon have no important insects but FLORIDA RED SCALE (Chrysomphalus aonidum), as well as other scales, is found on them when the groves are near citrus. APHIDS are also found on bananas. On citrus fruits, particularly oranges, both CALIFORNIA RED SCALE (Aonidiella aurantii) (called the black scale in Lebanon) and FLORIDA RED SCALE were extremely severe in the coastal area of central and north Lebanon. All stages were found the year around. This seems to be due chiefly to the fact that the trees are crowded and overlap each other along with the lack of proper control and cultural measures. In south Lebanon where more recently-developed orchards with proper spacing and culture occur, few scales were found, even where only one

*In so far as possible scientific names have been cleared with ARS records.

spraying a year was applied. SPIDER MITES were quite a problem on citrus and CITRUS RUST MITE (Phyllocoptruta oleivora) was extremely severe, particularly on lemons. MEDITERRANEAN FRUIT FLY was also a problem in the citrus crop.

Truck Crop and Vegetable Insects

Truck crops and vegetables were damaged considerably by WHITE GRUBS (Melolontha melolontha and Polyphylla fullo) and MOLE CRICKETS (Gryllotalpa sp., prob. gryllotalpa). POTATO TUBERWORM (Gnorimoschema operculella) was quite serious in the Bekaa Valley. CUTWORMS, mostly Agrotis ypsilon, also damaged truck crops. CABBAGEWORMS (Pieris sp.) were also observed. As in 1954, there was a serious outbreak of APHIDS (Aphis sp.) in bush beans near Jib-Jinnine in the Bekaa.

Cereal and Forage Insects

The most serious insect observed damaging corn at the three USOM experiment stations was the EUROPEAN CORN BORER (Pyrausta nubilalis). Damage was heavy. A LEPIDOPTERON (Syringopais temperatella) is very damaging to wheat in the spring. The larvae feed on the young leaves. SEN PEST (Eurygaster integriceps) was also quite serious on wheat, particularly in the Bekaa. Alfalfa in the Bekaa receives no control, yet APHIDS are apparently held in check by a parasite (Praon sp.) and a predator (Coccinella sp.).

Tobacco Insects

Tobacco is a major crop in southeast Lebanon. Chief pests include ONION THRIPS (Thrips tabaci), BLACK CUTWORM (Agrotis ypsilon) and WHITE GRUBS (Melolontha sp. and Polyphylla sp.).

Cotton Insects

Cotton, which is a limited crop in Lebanon, was severely attacked by SPINY BOLLWORM (Earias insulana). COTTON APHID (Aphis gossypii) and THRIPS were also of concern.

Nut Insects

Worst pests of nuts, mostly pistachios and almonds, are COLEOPTEROUS BORERS which attack the nut itself.

Miscellaneous Insects

HOUSE FLY (Musca domestica) populations are high during summer in Beirut, particularly around dairies and country villages where there is a lack of proper sanitation. COCKROACHES, especially Supella supellectilium and Blattella germanica, caused numerous complaints in Beirut. AMERICAN COCKROACH (Periplaneta americana) was not noted so freely, however.

USDA, AGRICULTURAL RESEARCH SERVICE
ENTOMOLOGY RESEARCH BR
FRUIT INSECTS SECTION
3-7-55 PLANT INDUSTRY STATION
IPS BELTSVILLE, MD

